

WHAT IS CLAIMED IS:

1. An appliance leakage current interrupter (ALCI) for interrupting the flow of current through a pair of lines extending between a source of power and a load, said appliance leakage current interrupter comprising:

- Suba.
- (a). a circuit breaker having a pair of normally closed switches, one switch being located in each of said lines between the source of power and the load;
 - (b). a relay circuit for selectively opening the pair of normally closed switches;
 - (c). a fault detection circuit for detecting the presence of a ground fault condition in said pair of lines and for causing said relay circuit to open said circuit breaker when said fault condition detected exceeds a predetermined value, said fault detection circuit comprising an integrated circuit chip and a transformer; and
 - (d). a single-sided circuit board having a first side and a second side, the second side having a pattern of conductive paths;
 - (e). wherein said integrated circuit chip is mounted on the second side of said single-sided circuit board.

2. The appliance leakage current interrupter as claimed in claim 1 wherein said transformer includes a common core having three laminated layers, a primary winding and a secondary winding, said pair of lines serving as the primary winding for the transformer, each of said pair of lines being wrapped twice around the core of said transformer.

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3. The appliance leakage current interrupter as claimed in claim 2 further comprising a generally rectangular-shaped housing, said housing being mounted on an end of an electrical cord connected to the load, said electrical cord having a longitudinal axis.

4. The appliance leakage current interrupter as claimed in claim 3 further comprising a prong assembly for supplying power from the source of power to the remainder of said appliance leakage current interrupter, said prong assembly comprising:

- a) a pair of contact prongs which extend through said housing;
- b) a pair of conductive bracket arms positioned within said housing, each bracket arm being in contact with an associated contact prong; and
- c) a pair of conductive contact arms pivotally mounted within said housing, each contact arm capable of selective contact with an associated bracket arm, said contact arms being connected to the remainder of said appliance leakage current interrupter such that only when each contact arm is in contact with its associated bracket arm, power is supplied to said appliance leakage current interrupter.

5. The appliance leakage current interrupter as claimed in claim 4 wherein said pair of prongs extend out from said housing at an angle of 180 degrees from the longitudinal axis of the cord.

6. The appliance leakage current interrupter as claimed in claim 4 wherein said pair of prongs extend out from said housing at an angle of 90 degrees from the longitudinal axis of the cord.

7. The appliance leakage current interrupter as claimed in claim 6 further comprising a power supply circuit for providing alternating current to the integrated circuit chip,

